

Audit Findings

West Section Rain Gauge Replacement and Relocation Project Management



Background – EWR 423551 sub 603

- Replace 11 rainfall monitoring instruments in west section
- Relocate gauges as necessary to increase data quality and consistency (among sites)



Evan Marks,
Project Management Intern

Photo by Julia Masnik

Objectives

**Replacement
Relocation
Standardization**



ASSIST



**Data Quality
Modeling**

Asset Management Objectives

Project Flow

1) Initiation

- 1) Team development
- 2) Information gathering

2) Planning

- 1) Documentation

3) Controlling

4) Site Assessment

- 1) Documentation
- 2) information gathering

5) Resource and Cost Planning

- 1) Contract development

6) Implementation

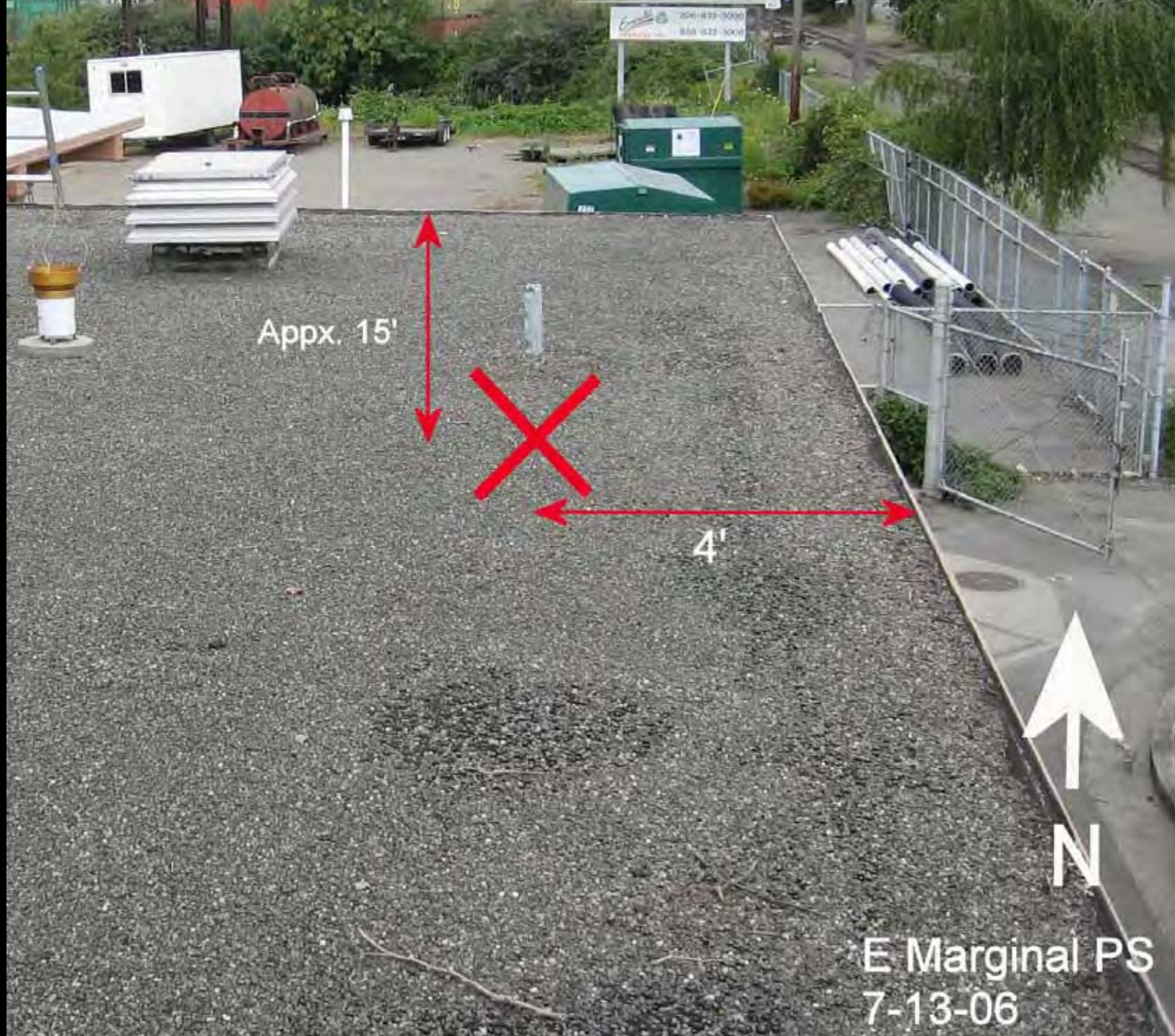
- 1) commissioning
- 2) testing

7) Closure

Documentation

- Project Plan
- Internal SOW
- Contractor SOW
- Quality Assessment
- Risk Assessment
- Relocation and Replacement Plan
- Site Visits
- Photo Documentation / Sketches





Appx. 15'

4'

N

E Marginal PS
7-13-06

Alternatives Considered

- Gauge choice
 - Reliability
 - Durability
 - Accuracy
- Dexter gauge location
 - Safety
 - Accessibility
 - Data quality
 - Cost

Project Management Findings

- Project schedule evolved for too long
 - Due to uncertainties in contractor procurement
- Adequate documentation
 - Early planning work successfully mitigated against later confusion or concerns
- Project manager well supported by supervisor
 - Weekly project meetings
 - Prompt responses to questions
 - Sharing of materials and experience

Lessons Learned

- Significant work in planning/documentation
 - <\$50,000 project
- Project managers must be able multi-taskers - other work included:
 - Temporary control equipment (TCE) inventory
 - TCE asset management study and implementation
 - Equipment purchase for 53rd Ave P.S. Upgrade
 - Water Quality Data Management project consultant scope drafting
 - Assistance on vendor selection/RFP for Supervisory Process Control System
 - Fiber optic network study update, project development

Lessons Learned cont.

- Importance of prompt and efficient information-gathering: talk to every stakeholder first, so new knowledge does not disrupt work already begun
- Utilize technical staff and members of the project team
- When issues arise, proceed on no less than a second opinion



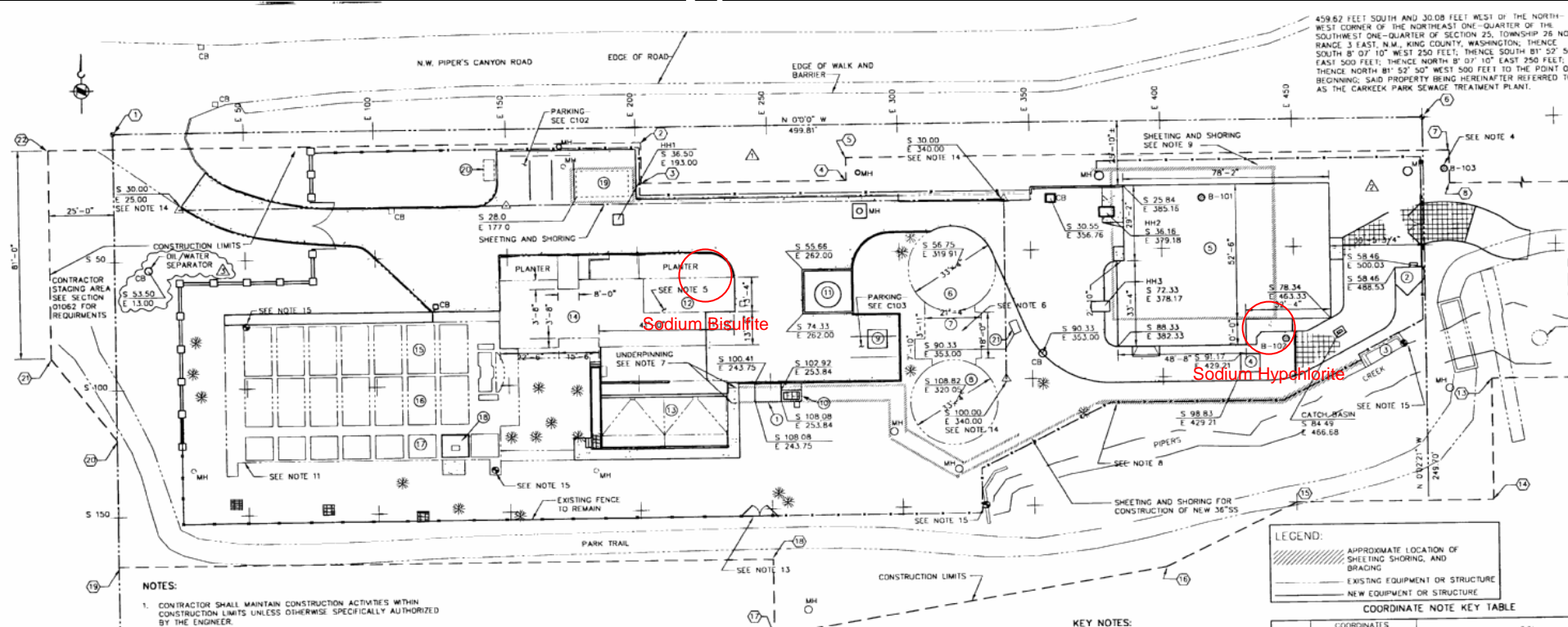
Chemical Containment at Carkeek CSO: An audit



Michael Stennis,
Project Management Intern

Background

- Built in 1992
- Located adjacent to Pipers Creek
- Contains chemical treatment storage for Sodium Bisulfite & Sodium Hypochlorite



Project Objectives

- Design and construct a chemical containment area that protected three critical points
 - 2 fill-ports
 - The supply hose
 - The discharge point
- Install a C2 system for flushing drainage piping
- Establish an area that allows easy access for a filling truck from which to enter and exit



Project Management Findings

- The project planning process extended beyond the necessary needs of the project
 - However, the planning process offered invaluable project management experience
- Updates to project plan and schedule helped maintain project control
- Continuous communication between project team members sustains project momentum



Lessons Learned

- Effective use of project management resources resides in multi-tasking
 - Additional Projects included:
 - Ballard Siphon: Emergency Contingency Plan
 - Ballard Siphon: Emergency Repair assistant
 - Temporary Control Equipment: Inventory, Schedule, and Purchase
 - York PS: Carbon Tower Safety
- Accountability of project team members and resources helps determine project momentum
- The level of comprehension of a project's scope by a PM facilitates the level of success of a completed project

TCE: Temporary Control Equipment

An Audit

